

APPENDIX B
EXISTING LOS WORKSHEETS

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #1 Rocklin Road/Pacific Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.699
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 13 columns for saturation flow rates and adjustment factors like Sat/Lane, Adjustment, etc.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics like Vol/Sat, Crit Volume, Crit Moves, etc.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2 Rocklin Road/Granite Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.448
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes.

Volume Module: Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow related metrics like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics like Vol/Sat, Crit Volume, Crit Moves.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Rocklin Road/I-80 Westbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.686
Loss Time (sec): 6 Average Delay (sec/veh): 19.1
Optimal Cycle: 41 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, PHF Adj, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics like Vol/Sat, Crit Moves, Green/Cycle, Delay/Veh, etc.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Rocklin Road/I-80 Eastbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.721
Loss Time (sec): 6 Average Delay (sec/veh): 25.4
Optimal Cycle: 45 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for each. Rows include Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with 13 columns representing saturation flow factors like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5 Dominguez Road/Pacific Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.385
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with 13 columns and 13 rows including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with 13 columns and 5 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 13 columns and 4 rows including Vol/Sat, Crit Volume, and Crit Moves.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 Dominguez Road/Granite Drive

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: B[11.3]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Uncontrolled/Stop Sign), Rights (Include), and Lanes.

Volume Module: Table with 13 columns for traffic flow metrics. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module: Table with 13 columns for gap metrics. Rows include Critical Gp and FollowUpTim.

Capacity Module: Table with 13 columns for capacity metrics. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module: Table with 13 columns for LOS metrics. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Sierra College Boulevard/Taylor Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.571
Loss Time (sec): 8 Average Delay (sec/veh): 28.6
Optimal Cycle: 36 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for Movement. Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Sierra College Boulevard/Brace Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.397
Loss Time (sec): 8 Average Delay (sec/veh): 19.1
Optimal Cycle: 39 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #9 Sierra College Boulevard/Granite Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.433
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

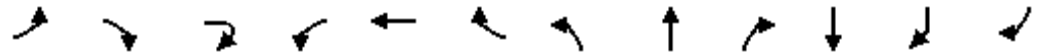
Table with 13 columns representing saturation flow factors like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis factors like Vol/Sat, Crit Volume, Crit Moves.

HCM Signalized Intersection Capacity Analysis
 10: I-80 WB & Sierra College Blvd.

10/6/2010



Movement	EBL	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR	SBR2
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↖↗↘	↗	↖↗	↗	↖
Volume (vph)	0	4	1	573	6	230	0	411	37	558	111	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00		0.97	0.95	0.95		0.91	1.00	0.95	1.00	1.00
Frt		0.85		1.00	0.86	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)		1583		3433	1518	1504		5085	1583	3539	1863	1583
Flt Permitted		1.00		0.95	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)		1583		3433	1518	1504		5085	1583	3539	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	4	1	623	7	250	0	447	40	607	121	9
RTOR Reduction (vph)	0	1	0	0	86	11	0	0	0	0	0	4
Lane Group Flow (vph)	0	4	0	623	44	116	0	447	40	607	121	6
Turn Type	Prot	custom		Prot		custom	Prot		Free		Prot	Perm
Protected Phases	7	4		3	8	8	5	2		6	6	
Permitted Phases		5 7				2			Free			6
Actuated Green, G (s)		1.3		21.7	27.0	82.0		55.0	90.0	55.0	55.0	55.0
Effective Green, g (s)		1.3		21.7	27.0	82.0		55.0	90.0	55.0	55.0	55.0
Actuated g/C Ratio		0.01		0.24	0.30	0.91		0.61	1.00	0.61	0.61	0.61
Clearance Time (s)		4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		23		828	455	1504		3108	1583	2163	1139	967
v/s Ratio Prot		0.00		c0.18	0.03	c0.02		0.09		c0.17	0.06	
v/s Ratio Perm						0.05			0.03			0.00
v/c Ratio		0.17		0.75	0.10	0.08		0.14	0.03	0.28	0.11	0.01
Uniform Delay, d1		43.8		31.7	22.7	0.4		7.5	0.0	8.2	7.3	6.8
Progression Factor		1.00		1.00	1.00	1.00		0.71	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.6		3.9	0.1	0.0		0.1	0.0	0.3	0.2	0.0
Delay (s)		47.4		35.6	22.8	0.4		5.4	0.0	8.5	7.5	6.8
Level of Service		D		D	C	A		A	A	A	A	A
Approach Delay (s)					28.6			5.0		8.3		
Approach LOS					C			A		A		































Intersection Summary

HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

11: I-80 EB & Rocklin Crossings

10/6/2010

												
Movement	EBL2	EBT	EBR	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL	SBT	SBR
Lane Configurations	 	 					  			 	 	
Volume (vph)	184	1	123	0	0	0	264	244	1	0	1020	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0				4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	1.00				0.91	1.00	1.00		0.95	1.00
Frt	1.00	1.00	0.85				1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00				1.00	1.00	1.00		1.00	1.00
Satd. Flow (prot)	3433	3539	1583				5085	1863	1583		3539	1583
Flt Permitted	0.95	1.00	1.00				1.00	1.00	1.00		1.00	1.00
Satd. Flow (perm)	3433	3539	1583				5085	1863	1583		3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	200	1	134	0	0	0	287	265	1	0	1109	126
RTOR Reduction (vph)	0	0	103	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	200	1	31	0	0	0	287	265	1	0	1109	126
Turn Type	Split		Perm	custom	custom	Free		Prot	Perm	Prot		Free
Protected Phases	4	4					2	2		1	6	
Permitted Phases			4	7	7	Free			2			Free
Actuated Green, G (s)	10.6	10.6	10.6				71.4	71.4	71.4		71.4	90.0
Effective Green, g (s)	10.6	10.6	10.6				71.4	71.4	71.4		71.4	90.0
Actuated g/C Ratio	0.12	0.12	0.12				0.79	0.79	0.79		0.79	1.00
Clearance Time (s)	4.0	4.0	4.0				4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0				3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	404	417	186				4034	1478	1256		2808	1583
v/s Ratio Prot	c0.06	0.00					0.06	0.14			c0.31	
v/s Ratio Perm			0.02						0.00			0.08
v/c Ratio	0.50	0.00	0.17				0.07	0.18	0.00		0.39	0.08
Uniform Delay, d1	37.2	35.0	35.7				2.0	2.2	1.9		2.8	0.0
Progression Factor	1.00	1.00	1.00				1.00	1.00	1.00		0.41	1.00
Incremental Delay, d2	1.0	0.0	0.4				0.0	0.3	0.0		0.4	0.1
Delay (s)	38.1	35.0	36.1				2.1	2.5	1.9		1.5	0.1
Level of Service	D	D	D				A	A	A		A	A
Approach Delay (s)		37.3					2.3				1.4	
Approach LOS		D					A				A	

Intersection Summary

HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #12 Sierra College Boulevard/Dominguez Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.254
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with 13 columns and 13 rows including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with 13 columns and 5 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 13 columns and 4 rows including Vol/Sat, Crit Volume, and Crit Moves.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #13 Sierra College Boulevard/Rocklin Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.748
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 68 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, Y+R, Lanes.

Volume Module:

Table with 12 columns for volume adjustments: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 12 columns for saturation flow: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns for capacity analysis: Vol/Sat, Crit Volume, Crit Moves.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 Taylor Road/Horseshoe Bar Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.866
Loss Time (sec): 8 Average Delay (sec/veh): 25.8
Optimal Cycle: 84 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns for volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 Horseshoe Bar Road/I-80 Westbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.306
Loss Time (sec): 8 Average Delay (sec/veh): 18.5
Optimal Cycle: 24 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow factors like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, etc.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Horseshoe Bar Road/I-80 Eastbound Ramp

Average Delay (sec/veh): 6.4 Worst Case Level Of Service: C [16.8]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, and Lanes.

Volume Module:

Table with 13 columns representing traffic volumes and adjustments. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module:

Table with 13 columns for critical gap and follow-up time. Rows include Critical Gp and FollowUpTim.

Capacity Module:

Table with 13 columns for capacity metrics. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module:

Table with 13 columns for level of service metrics. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #17 Barton Road/Brace Road

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A[9.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:
Base Vol: 14 0 64 0 0 0 0 0 89 20 68 69 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 14 0 64 0 0 0 0 0 89 20 68 69 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80
PHF Volume: 17 0 80 0 0 0 0 0 111 25 85 86 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 17 0 80 0 0 0 0 0 111 25 85 86 0

Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 4.1 xxxxx xxxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 2.2 xxxxx xxxxxx

Capacity Module:
Cnflct Vol: 379 379 123 xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 136 xxxxx xxxxxx
Potent Cap.: 627 556 933 xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 1461 xxxxx xxxxxx
Move Cap.: 598 522 933 xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 1461 xxxxx xxxxxx
Volume/Cap: 0.03 0.00 0.09 xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.06 xxxxx xxxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.2 xxxxx xxxxxx
Control Del: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 7.6 xxxxx xxxxxx
LOS by Move: *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 848 xxxxxx xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx
SharedQueue: xxxxxx 0.4 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.2 xxxxx xxxxxx
Shrd ConDel: xxxxxx 9.8 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 7.6 xxxxx xxxxxx
Shared LOS: * A *
ApproachDel: 9.8 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: A * * *

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Barton Road/Rocklin Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.376
Loss Time (sec): 0 Average Delay (sec/veh): 9.9
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, Lanes.

Volume Module:

Table with 13 columns for volume adjustments: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #19 Sierra College Boulevard/King Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.462
Loss Time (sec): 9 Average Delay (sec/veh): 15.5
Optimal Cycle: 32 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control, Rights, Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 Sierra College Boulevard/English Colony Way

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: A[9.8]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Uncontrolled/Stop Sign), Rights (Include), and Lanes.

Volume Module: Table with 13 columns for traffic flow directions. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module: Table with 13 columns. Rows include Critical Gp and FollowUpTim with values like 4.1, 6.4, 2.2, 3.5.

Capacity Module: Table with 13 columns. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module: Table with 13 columns. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #21 Taylor Road/King Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.591
Loss Time (sec): 9 Average Delay (sec/veh): 33.0
Optimal Cycle: 40 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Protected), Rights (Include), Min. Green (0), Y+R (4.0), Lanes (1 0 1 0 1).

Volume Module:

Table with 13 columns for volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #1 Rocklin Road/Pacific Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.701
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with 13 columns and 13 rows including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with 13 columns and 5 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 13 columns and 4 rows including Vol/Sat, Crit Volume, and Crit Moves.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2 Rocklin Road/Granite Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.607
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Volume, and Crit Moves.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Rocklin Road/I-80 Westbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.691
Loss Time (sec): 6 Average Delay (sec/veh): 18.8
Optimal Cycle: 41 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Split Phase, Permitted, Protected), and Rights (Include). Includes values for Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors (Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume) and 4 rows of data.

Saturation Flow Module:

Table with 13 columns for saturation flow factors (Sat/Lane, Adjustment, Lanes, Final Sat) and 4 rows of data.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ) and 9 rows of data.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Rocklin Road/I-80 Eastbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.733
Loss Time (sec): 6 Average Delay (sec/veh): 24.6
Optimal Cycle: 46 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Split Phase, Protected, Permitted), Rights (Include), Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5 Dominguez Road/Pacific Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.483
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Volume, and Crit Moves.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 Dominguez Road/Granite Drive

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: B[11.5]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Uncontrolled/Stop Sign), Rights (Include), and Lanes (1 0 2 0 0).

Volume Module: Table with 13 columns for traffic flow metrics. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module: Table with 13 columns for gap metrics. Rows include Critical Gp and FollowUpTim.

Capacity Module: Table with 13 columns for capacity metrics. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module: Table with 13 columns for LOS metrics. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Sierra College Boulevard/Taylor Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.570
Loss Time (sec): 8 Average Delay (sec/veh): 28.2
Optimal Cycle: 36 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for Movement. Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Sierra College Boulevard/Brace Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.538
Loss Time (sec): 8 Average Delay (sec/veh): 12.9
Optimal Cycle: 34 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for each. Rows include Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #9 Sierra College Boulevard/Granite Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.391
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

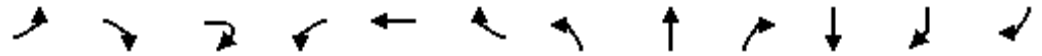
Volume Module: Table with 13 columns for different volume metrics and 13 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 13 columns for saturation flow metrics and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity metrics and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

HCM Signalized Intersection Capacity Analysis
 10: I-80 WB & Sierra College Blvd.

10/6/2010



Movement	EBL	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR	SBR2
Lane Configurations	↖	↗		↖↗	↖	↗	↖	↑↑↑	↗	↑↑	↗	↖
Volume (vph)	7	10	4	291	6	176	7	573	61	472	178	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		0.97	0.95	0.95	1.00	0.91	1.00	0.95	1.00	1.00
Frt	1.00	0.85		1.00	0.86	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583		3433	1523	1504	1770	5085	1583	3539	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583		3433	1523	1504	1770	5085	1583	3539	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	11	4	316	7	191	8	623	66	513	193	9
RTOR Reduction (vph)	0	4	0	0	75	24	0	0	0	0	0	5
Lane Group Flow (vph)	8	11	0	316	24	75	8	623	66	513	193	4
Turn Type	Prot	custom		Prot	custom		Prot		Free		Prot	Perm
Protected Phases	7	4		3	8	8	5	2		6	6	
Permitted Phases		5 7				2			Free			6
Actuated Green, G (s)	0.7	1.6		9.6	9.8	40.4	0.7	30.6	53.1	25.9	25.9	25.9
Effective Green, g (s)	0.7	1.6		9.6	9.8	40.4	0.7	30.6	53.1	25.9	25.9	25.9
Actuated g/C Ratio	0.01	0.03		0.18	0.18	0.76	0.01	0.58	1.00	0.49	0.49	0.49
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	23	167		621	281	1258	23	2930	1583	1726	909	772
v/s Ratio Prot	c0.00	0.00		c0.09	0.02	0.01	0.00	c0.12		c0.14	0.10	
v/s Ratio Perm		0.01				0.04			c0.04			0.00
v/c Ratio	0.35	0.07		0.51	0.09	0.06	0.35	0.21	0.04	0.30	0.21	0.01
Uniform Delay, d1	26.0	25.0		19.6	17.9	1.6	26.0	5.4	0.0	8.1	7.8	7.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.9	0.2		0.7	0.1	0.0	8.9	0.2	0.0	0.4	0.5	0.0
Delay (s)	34.9	25.2		20.3	18.1	1.6	34.9	5.6	0.0	8.6	8.3	7.0
Level of Service	C	C		C	B	A	C	A	A	A	A	A
Approach Delay (s)					16.3			5.4		8.5		
Approach LOS					B			A		A		
































Intersection Summary

HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

11: I-80 EB & Rocklin Crossings

10/6/2010

												
Movement	EBL2	EBT	EBR	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL	SBT	SBR
Lane Configurations	 	 			 		  			 	 	
Volume (vph)	262	1	40	0	2	0	377	381	2	2	577	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00		1.00		0.91	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85		0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00		1.00	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583		1583		5085	1863	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00		1.00		1.00	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583		1583		5085	1863	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	285	1	43	0	2	0	410	414	2	2	627	215
RTOR Reduction (vph)	0	0	35	0	0	0	0	0	1	0	0	0
Lane Group Flow (vph)	285	1	8	0	2	0	410	414	1	2	627	215
Turn Type	Split		Perm	custom	custom	Free		Prot	Perm	Prot		Free
Protected Phases	4	4					2	2		1		6
Permitted Phases			4	7	7	Free			2			Free
Actuated Green, G (s)	9.1	9.1	9.1		9.1		27.3	27.3	27.3	0.8	32.1	49.2
Effective Green, g (s)	9.1	9.1	9.1		9.1		27.3	27.3	27.3	0.8	32.1	49.2
Actuated g/C Ratio	0.18	0.18	0.18		0.18		0.55	0.55	0.55	0.02	0.65	1.00
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	635	655	293		293		2822	1034	878	56	2309	1583
v/s Ratio Prot	c0.08	0.00					0.08	c0.22		0.00	0.18	
v/s Ratio Perm			0.01		0.00				0.00			c0.14
v/c Ratio	0.45	0.00	0.03		0.01		0.15	0.40	0.00	0.04	0.27	0.14
Uniform Delay, d1	17.8	16.3	16.4		16.4		5.3	6.3	4.9	23.8	3.6	0.0
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.0	0.0		0.0		0.1	1.2	0.0	0.3	0.3	0.2
Delay (s)	18.3	16.3	16.5		16.4		5.4	7.4	4.9	24.1	3.9	0.2
Level of Service	B	B	B		B		A	A	A	C	A	A
Approach Delay (s)		18.1					6.4				3.0	
Approach LOS		B					A				A	
Intersection Summary												
HCM Average Control Delay			6.9				HCM Level of Service			A		
HCM Volume to Capacity ratio			0.38									
Actuated Cycle Length (s)			49.2				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			40.3%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #12 Sierra College Boulevard/Dominguez Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.169
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow related metrics like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics like Vol/Sat, Crit Volume, Crit Moves.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #13 Sierra College Boulevard/Rocklin Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.661
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 51 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow factors like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis factors like Vol/Sat, Crit Volume, Crit Moves.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 Taylor Road/Horseshoe Bar Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.553
Loss Time (sec): 8 Average Delay (sec/veh): 18.6
Optimal Cycle: 35 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 Horseshoe Bar Road/I-80 Westbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.275
Loss Time (sec): 8 Average Delay (sec/veh): 19.4
Optimal Cycle: 23 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control, Rights, Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Horseshoe Bar Road/I-80 Eastbound Ramp

Average Delay (sec/veh): 9.0 Worst Case Level Of Service: C [16.9]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, and Lanes.

Volume Module: Table with 12 columns for traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Critical Gap Module: Table with 12 columns for critical gap and follow-up time values.

Capacity Module: Table with 12 columns for capacity-related metrics like Cnflct Vol, Potent Cap., Move Cap., etc.

Level Of Service Module: Table with 12 columns for LOS metrics like 2Way95thQ, Control Del, Shared Cap., etc.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #17 Barton Road/Brace Road

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A[9.7]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes (0 0 1! 0 0).

Volume Module: Table with 13 columns for traffic volumes and adjustment factors (Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume).

Critical Gap Module: Table with 13 columns for critical gap and follow-up time values.

Capacity Module: Table with 13 columns for capacity-related metrics (Conflict Vol, Potent Cap., Move Cap., Volume/Cap.).

Level Of Service Module: Table with 13 columns for LOS metrics (2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS).

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Barton Road/Rocklin Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.328
Loss Time (sec): 0 Average Delay (sec/veh): 9.7
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green (0), Lanes (1 0 1 0 0).

Volume Module:

Table with 13 columns for various volume and adjustment factors: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #19 Sierra College Boulevard/King Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.454
Loss Time (sec): 9 Average Delay (sec/veh): 11.2
Optimal Cycle: 32 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control, Rights, Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 Sierra College Boulevard/English Colony Way

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: B[13.8]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Uncontrolled/Stop Sign), Rights (Include), and Lanes (0-1).

Volume Module table with 13 columns and 8 rows: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module table with 13 columns and 2 rows: Critical Gp, FollowUpTim.

Capacity Module table with 13 columns and 4 rows: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table with 13 columns and 10 rows: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #21 Taylor Road/King Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.489
Loss Time (sec): 9 Average Delay (sec/veh): 30.0
Optimal Cycle: 34 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #1 Rocklin Road/Pacific Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.528
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Volume, Crit Moves.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #2 Rocklin Road/Granite Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.472
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns representing saturation flow factors like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis factors like Vol/Sat, Crit Volume, Crit Moves.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Rocklin Road/I-80 Westbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.602
Loss Time (sec): 6 Average Delay (sec/veh): 18.7
Optimal Cycle: 33 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for each. Rows include Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 Rocklin Road/I-80 Eastbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.542
Loss Time (sec): 6 Average Delay (sec/veh): 22.0
Optimal Cycle: 29 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for each. Rows include Movement, Control, Rights, Min. Green, Y+R, and Lanes.

-----|-----|-----|-----|

Volume Module: Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

-----|-----|-----|-----|

Saturation Flow Module: Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

-----|-----|-----|-----|

Capacity Analysis Module: Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5 Dominguez Road/Pacific Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.337
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Volume, Crit Moves.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 Dominguez Road/Granite Drive

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[9.9]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, and Lanes.

Volume Module: Table with 13 columns for volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module: Table with 13 columns for gap and follow-up times. Rows include Critical Gp and FollowUpTim.

Capacity Module: Table with 13 columns for capacity and volume/capacity. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module: Table with 13 columns for LOS and delay. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Sierra College Boulevard/Taylor Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 8 Average Delay (sec/veh): 28.5
Optimal Cycle: 29 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Protected), Rights (Include), Min. Green (0), Y+R (4.0), Lanes (1 0 1).

Volume Module:

Table with 13 columns for volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Sierra College Boulevard/Brace Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.396
Loss Time (sec): 8 Average Delay (sec/veh): 12.1
Optimal Cycle: 27 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns (L, T, R) for each. Rows include Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with 13 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 13 columns representing capacity analysis metrics. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #9 Sierra College Boulevard/Granite Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.325
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	1	0	2	1	0	1

Volume Module:

Base Vol:	113	409	103	74	293	65	80	37	79	125	26	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	113	409	103	74	293	65	80	37	79	125	26	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	409	103	74	293	65	80	37	79	125	26	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	409	103	74	293	65	80	37	79	125	26	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.00
FinalVolume:	113	409	103	74	293	65	80	37	87	125	26	44

Saturation Flow Module:

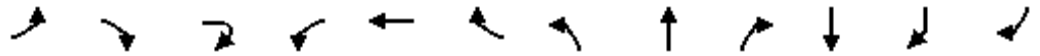
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	1375	2750	1375	1375	1375

Capacity Analysis Module:

Vol/Sat:	0.08	0.15	0.07	0.05	0.11	0.05	0.06	0.03	0.03	0.09	0.02	0.03
Crit Volume:	205			74			43			125		
Crit Moves:	****			****			****			****		

HCM Signalized Intersection Capacity Analysis
 10: I-80 WB & Sierra College Blvd.

10/6/2010

































Movement	EBL	EBR	EBR2	WBL2	WBT	WBR	NBL	NBT	NBR	SBT	SBR	SBR2
Lane Configurations												
Volume (vph)	3	3	1	173	1	152	5	461	44	239	228	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		0.97	0.95	0.95	1.00	0.91	1.00	0.95	1.00	1.00
Frt	1.00	0.85		1.00	0.85	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583		3433	1507	1504	1770	5085	1583	3539	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583		3433	1507	1504	1770	5085	1583	3539	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	3	1	188	1	165	5	501	48	260	248	1
RTOR Reduction (vph)	0	1	0	0	70	19	0	0	0	0	0	0
Lane Group Flow (vph)	3	3	0	188	14	63	5	501	48	260	248	1
Turn Type	Prot	custom		Prot	custom		Prot		Free		Prot	Perm
Protected Phases	7	4		3	8	8	5	2		6	6	
Permitted Phases		5 7				2			Free			6
Actuated Green, G (s)	0.7	2.4		8.3	8.6	43.4	0.7	34.8	56.1	30.1	30.1	30.1
Effective Green, g (s)	0.7	2.4		8.3	8.6	43.4	0.7	34.8	56.1	30.1	30.1	30.1
Actuated g/C Ratio	0.01	0.04		0.15	0.15	0.77	0.01	0.62	1.00	0.54	0.54	0.54
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	22	181		508	231	1271	22	3154	1583	1899	1000	849
v/s Ratio Prot	0.00	0.00		c0.05	0.01	c0.01	0.00	c0.10		0.07	c0.13	
v/s Ratio Perm		0.00				0.03			0.03			0.00
v/c Ratio	0.14	0.02		0.37	0.06	0.05	0.23	0.16	0.03	0.14	0.25	0.00
Uniform Delay, d1	27.4	25.7		21.5	20.3	1.5	27.4	4.5	0.0	6.5	6.9	6.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	0.0		0.5	0.1	0.0	5.2	0.1	0.0	0.2	0.6	0.0
Delay (s)	30.2	25.8		22.0	20.4	1.5	32.6	4.6	0.0	6.7	7.5	6.0
Level of Service	C	C		C	C	A	C	A	A	A	A	A
Approach Delay (s)					16.9			4.5		7.1		
Approach LOS					B			A		A		

Intersection Summary		
HCM Average Control Delay	8.6	HCM Level of Service
HCM Volume to Capacity ratio	0.25	A
Actuated Cycle Length (s)	56.1	Sum of lost time (s)
Intersection Capacity Utilization	30.8%	ICU Level of Service
Analysis Period (min)	15	A
c Critical Lane Group		

HCM Signalized Intersection Capacity Analysis

11: I-80 EB & Rocklin Crossings

10/6/2010

												
Movement	EBL2	EBT	EBR	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL	SBT	SBR
Lane Configurations	 	 					  			 	 	
Volume (vph)	192	3	163	4	0	0	318	216	1	5	371	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00			0.91	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00			1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95			1.00	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770			5085	1863	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.76			1.00	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1408			5085	1863	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	209	3	177	4	0	0	346	235	1	5	403	43
RTOR Reduction (vph)	0	0	147	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	209	3	30	4	0	0	346	235	1	5	403	43
Turn Type	Split		Perm	custom	custom	Free		Prot	Perm	Prot		Free
Protected Phases	4	4					2	2		1	6	
Permitted Phases			4	7	7	Free			2			Free
Actuated Green, G (s)	8.4	8.4	8.4	8.4			27.9	27.9	27.9	0.8	32.7	49.1
Effective Green, g (s)	8.4	8.4	8.4	8.4			27.9	27.9	27.9	0.8	32.7	49.1
Actuated g/C Ratio	0.17	0.17	0.17	0.17			0.57	0.57	0.57	0.02	0.67	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	587	605	271	241			2889	1059	900	56	2357	1583
v/s Ratio Prot	c0.06	0.00					0.07	c0.13		0.00	c0.11	
v/s Ratio Perm			0.02	0.00					0.00			0.03
v/c Ratio	0.36	0.00	0.11	0.02			0.12	0.22	0.00	0.09	0.17	0.03
Uniform Delay, d1	18.0	16.9	17.2	16.9			4.9	5.2	4.6	23.8	3.1	0.0
Progression Factor	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.2	0.0			0.1	0.5	0.0	0.7	0.2	0.0
Delay (s)	18.3	16.9	17.4	16.9			5.0	5.7	4.6	24.5	3.2	0.0
Level of Service	B	B	B	B			A	A	A	C	A	A
Approach Delay (s)		17.9					5.3				3.2	
Approach LOS		B					A				A	

Intersection Summary

HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	49.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #12 Sierra College Boulevard/Dominguez Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.120
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module: Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, etc.

Capacity Analysis Module: Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Volume, Crit Moves.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #13 Sierra College Boulevard/Rocklin Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.562
Loss Time (sec): 8 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module:

Table with 13 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics like Sat/Lane, Adjustment, Lanes, Final Sat., etc.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics like Vol/Sat, Crit Volume, Crit Moves, etc.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 Taylor Road/Horseshoe Bar Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.683
Loss Time (sec): 8 Average Delay (sec/veh): 17.6
Optimal Cycle: 46 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 Horseshoe Bar Road/I-80 Westbound Ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.263
Loss Time (sec): 8 Average Delay (sec/veh): 21.7
Optimal Cycle: 23 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control, Rights, Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Horseshoe Bar Road/I-80 Eastbound Ramp

Average Delay (sec/veh): 6.5 Worst Case Level Of Service: B[13.4]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, and Lanes.

Volume Module: Table with 12 columns for traffic volumes and adjustments. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module: Table with 12 columns for gap and follow-up times. Rows include Critical Gp and FollowUpTim.

Capacity Module: Table with 12 columns for capacity and volume/capacity. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module: Table with 12 columns for LOS metrics. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #17 Barton Road/Brace Road

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A[9.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0

Volume Module:
Base Vol: 17 0 63 0 0 0 0 0 71 17 51 65 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 17 0 63 0 0 0 0 0 71 17 51 65 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89
PHF Volume: 19 0 71 0 0 0 0 0 80 19 57 73 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 19 0 71 0 0 0 0 0 80 19 57 73 0

Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 4.1 xxxx xxxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 2.2 xxxx xxxxxx

Capacity Module:
Cnflct Vol: 278 278 90 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 99 xxxxx xxxxxx
Potent Cap.: 716 634 974 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 1506 xxxxx xxxxxx
Move Cap.: 695 609 974 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 1506 xxxxx xxxxxx
Volume/Cap: 0.03 0.00 0.07 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.04 xxxxx xxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.1 xxxxx xxxxxx
Control Del: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 7.5 xxxxx xxxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 897 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue: xxxxxx 0.3 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.1 xxxxx xxxxxx
Shrd ConDel: xxxxxx 9.5 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 7.5 xxxxx xxxxxx
Shared LOS: * A * * * * * * * * * A * *
ApproachDel: 9.5 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: A * *

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Barton Road/Rocklin Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.261
Loss Time (sec): 0 Average Delay (sec/veh): 9.0
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green (0), Lanes (1 0 1 0 0).

Volume Module:

Table with 13 columns for volume adjustments: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #19 Sierra College Boulevard/King Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.325
Loss Time (sec): 9 Average Delay (sec/veh): 13.6
Optimal Cycle: 26 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control, Rights, Min. Green, Y+R, Lanes.

Volume Module:

Table with 13 columns for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, etc.

Saturation Flow Module:

Table with 13 columns for saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat., etc.

Capacity Analysis Module:

Table with 13 columns for capacity analysis factors like Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 Sierra College Boulevard/English Colony Way

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[10.8]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Uncontrolled/Stop Sign), Rights (Include), and Lanes (0 0 0 1 0).

Volume Module: Table with 13 columns for volume metrics (Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume) across 4 movements.

Critical Gap Module: Table with 13 columns for gap metrics (Critical Gp, FollowUpTim) across 4 movements.

Capacity Module: Table with 13 columns for capacity metrics (Cnflct Vol, Potent Cap., Move Cap., Volume/Cap) across 4 movements.

Level Of Service Module: Table with 13 columns for LOS metrics (2Way95thQ, Control Del, LOS by Move, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS) across 4 movements.

Note: Queue reported is the number of cars per lane.

Rocklin Crossings
Existing Conditions - Saturday

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #21 Taylor Road/King Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.391
Loss Time (sec): 9 Average Delay (sec/veh): 27.8
Optimal Cycle: 29 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement (L, T, R), Control (Protected), Rights (Include), Min. Green (0), Y+R (4.0), Lanes (1 0 1 0 1).

Volume Module:

Table with 13 columns for various volume metrics (Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume) and 4 rows of data.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics (Sat/Lane, Adjustment, Lanes, Final Sat) and 4 rows of data.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ) and 9 rows of data.

Note: Queue reported is the number of cars per lane.
